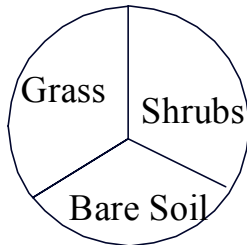




# THE COVEY HEADQUARTERS

Volume 4      Issue 1      Spring 2005

This newsletter issue starts the fourth year of an effort aimed at cooperators and sportspeople in Missouri to provide information on restoring quail. This is a joint effort of the Missouri Department of Conservation, USDA-Natural Resources Conservation Service, University of Missouri Extension and Quail Unlimited. If you would like to be removed from this mailing list or have suggestions for future articles please contact [jeff.powelson@mdc.mo.gov](mailto:jeff.powelson@mdc.mo.gov) or 816-232-6555 x122 or write to the address shown.



The name of this newsletter is taken from an old concept....that a quail covey operates from a headquarters (shrubby cover). If the rest of the covey's habitat needs are nearby, a covey should be present. We are encouraging landowners to manage their quail habitat according to this concept. Use shrubs as the cornerstone for your quail management efforts. Manage for a diverse grass, broadleaf weed and legume mixture and provide bare ground with row crops, food plots or light disking **right next to** the shrubby area.

## CP33 Habitat Buffers for Upland Birds

Travis Dinsdale, Area Biologist, St. Joseph

As you read this article, I hope many of you have already signed up for the new Continuous Conservation Reserve Program (CCRP) practice CP33 Habitat Buffers for Upland Birds. This practice has great potential to improve upland bird habitat on cropland. To participate in the program, participants enroll 30-120 foot wide buffers along cropland field edges. These buffers are planted to a mix of native grasses and wildflowers. At least 1/10 of an acre of shrubs must be planted as well. For improved shrubby cover, up to 10% of the buffer can be planted to shrubs.

Those of you that raised a crop last year remember the record setting harvest. Nearly perfect weather resulted in a bumper crop. While you were harvesting your crop last year there were still portions of the field that didn't produce very well – along woody draws, old fencelines, and next to the forest edge. Recover lost profits in these areas by establishing CP33 buffers. Receive an annual CRP rental payment, a \$100 per acre signup bonus, and cost share to establish the practice.

Many of you participate in MDC's LAWS program. CP33 would be a great substitute. LAWS is limited to 3 acres per participant. There is no acreage limit for CP33. Plus, CP33 buffers will provide a more permanent cover source for upland wildlife.

If you have received this newsletter for an extended period of time, you know the covey headquarter concept. Good shrubby cover, wildlife-friendly grasses, and bare ground all adjacent to one another. CP33 emulates the covey headquarter concept – shrubs/diverse grasses (CP33 requirement), and bare ground (adjacent cropland).

If you are not interested in CP33 at this time, take a look at your crop fields this summer and note the field edges that don't produce. This fall, enroll these low yield areas in CP33. You won't have to fight overhanging tree limbs with you equipment. Trees won't compete with your crop for light and moisture either.

Missouri can enroll up to 20,000 acres in CP33. That's 20,000 acres of quail habitat in cropland areas. Encourage your friends and neighbors with row crops to give CP33 a try. As little as one side of a field can be enrolled in the program. With your help, this program will benefit many grassland bird species. Most important, CP33 will get quality upland bird habitat back on cropland acres. Visit your local USDA office to learn more about CP33 and many other CCRP practices that can help you improve your farming operation.

# Restoring Quail in the Ozarks – It Can Be Done!

Bill White, Private Land Programs Supervisor, Jefferson City

The forestland you see in the Ozarks today is not the same thing that was there early last century. Many early documents about the Ozarks describe a park-like setting that a covered wagon could travel with apparent ease. The understory, especially on many south and west facing slopes, consisted of native grasses and wildflowers. Instead of seeing 200-400 trees per acre like we have today, the tree cover was generally under 30-60 trees per acre. In general, the Ozarks was a mosaic of forested north and east facing slopes, savannas with scattered trees on the ridge tops and rocky, open grassy glades on the dry southwest facing slopes..... perfect habitat for quail and many other grassland and shrubland birds. You can see these native grassland remnants pop up along road and powerline right-of-ways even in deep Ozark counties like Shannon or Douglas. In the absence of fire, many former glades have been over run by invading cedars. Many counties of the Ozarks also contained extensive shortleaf pine savannas, which have been smothered with hardwood trees in the absence of fire. Arkansas studies show that fire occurrence varied from once every 1 to 23 years in various parts of the Ozarks. Several private land cooperators have noticed native prairie plants spring up from the Ozark forest floor after a woodland burn, further indicating the suppression of the historic plant community.

The U.S. Forest Service in Missouri and Arkansas is actively restoring this mosaic of historic plant communities on national forest land in both states. Missouri has restored approximately 10,000 acres of pine savanna grassland on state and federal lands and Arkansas has restored over 100,000 acres. In addition, USDA Programs in Missouri are helping restore natural savannas and glades on private lands.

Bird surveys show that the quail have responded to the thinning, burning and restoration of the grass and shrub understory. Arkansas estimates that they can restore 1 covey of birds on every 100 acres of pine savanna restored. This is a far cry from the high quail populations in the sandy pinelands of Georgia and Alabama, because the Ozark pinelands are normally on droughty, rocky slopes. Arkansas finds that prescribed burning is necessary to make these native plant communities attractive to quail. If a burn does not occur every 4 years the vegetation changes enough that quail will abandon the site. Shrubs are a required habitat component and quail tend to roost where little bluestem grass is prominent.

Portions of the Ozarks that have been heavily modified and planted to fescue have potential for quail also. These areas need to have the fescue converted to native grass and wildflower mixes and edgefeathering performed on the timber edge to restore the shrubby cover. If grazing is a consideration, and the entire field cannot be converted to native grasses, the woodlands and stream courses can be fenced. Fescue between the fence and the edge of the forest can be eradicated and the forest edge feathered to encourage shrubby growth. Other practices that have successfully restored quail in the Ozarks include cedar removal, prescribed burning, glade, savanna and shortleaf pine restorations. All of these practices can be done with cost-share from several state or federal programs.

Contact MDC or NRCS to find out how you can restore quail habitat on your Ozark property.

## Did You Know???



Rob Tebbs, Pheasants Forever Private Lands Specialist, is now working out of the Lewis County USDA Office and is assisting private landowners who are interested in pheasants, quail, and other early successional species. He is focused in Lewis and Clark Counties, and is directly supervised by Bill Bergh, the Northeast Region Private Lands Regional Supervisor. This is a very unique position where a PF employee is working for MDC in a USDA Office. Right now the private landowners and associated wildlife species in Lewis and Clark Counties are the winners.

# Plants You Should Know: Wild Plums and Shrub Dogwoods.

Aaron P. Jeffries, Wildlife Services Biologist, Jefferson City

Both wild plum (*Prunus spp.*) and shrub dogwood (*Cornus spp.*) provide excellent habitat for bobwhite quail and other grassland wildlife. Wild plum and shrub dogwood are commonly 6 to 25 feet tall and equally as wide when mature. Rough-leaf, gray, swamp and silky are a few shrub dogwood species found in Missouri. There are also many different species of wild plum, but the most common are American and goose. Both wild plum and shrub dogwood are common in grassland and old field habitats. Wild plum is one of the first trees to bloom in spring while most shrub dogwoods flower in late spring and early summer.

One of the most desirable characteristics of wild plum and shrub dogwood are their ability to spread by underground stems (root suckers). As plum and dogwood mature, they send off root suckers which eventually grow into a large impenetrable thicket – the ideal “covey headquarter” for quail.

Landowners interested in planting shrub rows or covey headquarters should consider adding wild plum and shrub dogwood to their tree planting list this winter. Preferably a mix of shrub species should be planted to provide greater plant diversity. In Missouri bareroot shrubs can be planted March through May. Container grown shrubs can be planted anytime the ground is not frozen.

Proper site preparation is the key to planting success. Invasive cool-season grasses should be eradicated before planting. A pre-emergent herbicide or a cover crop of annual lespedeza should be used to reduce weed competition. Shrubs should be planted on a 5x5 foot spacing for covey headquarters and 6x10 foot spacing if establishing rows (that way you can mow between the rows). Plant at least 3 rows of shrubs to provide adequate cover. Each covey headquarter should be at least 1,500 square feet in size. Remember, 5 to 25% of a covey's home range should be in brushy or shrubby cover in the form of shrub plantings, edge feathering, or open brushpiles. Plan accordingly.

It will take a shrub planting 3 to 6 years from bareroot stock to mature and provide beneficial cover. To provide instant brushy cover, consider dragging 1 to 3 trees into the area where the shrubs will be planted. These should be placed on bare soil. Do not push the trees into a dense pile. Quail prefer open, loose brush piles. These “downed tree structures” will provide adequate cover while the shrubs become established.



**Wild Plum.**  
Picture courtesy of  
Missouri Department  
of Conservation 2004.



**Rough-leaf Dogwood**  
Picture courtesy of  
Missouri Department of  
Conservation 2004.

## How Many Shrubs Do I Need?

When planting shrubs for quail we normally recommend a 5x5 foot spacing covering a minimum 30x50ft. area (1500 square feet). How many shrubs on a 5x5 foot spacing are needed to cover the entire 30x50 foot covey headquarter? 77. Here's the math – take the area, 30x50 and divide each number by 5, this equals 6 and 10. Add one to each number and multiply –  $7 \times 11 = 77$ . **77 shrubs are needed for a 30x50ft. covey headquarter.** This works for any covey headquarter size.

How many shrubs are needed for a tenth of an acre covey headquarter? First, one acre equals 43,560 square feet. For a tenth of an acre you need a covey headquarter that equals 4,356 square feet. A 145x30 foot covey headquarters covers 4,350 square feet (a little shy of a tenth of an acre). Divide 145 and 30 by 5. This gives you 29 and 6. Add one to each and multiply –  $30 \times 7 = 210$ . **210 shrubs on a 5x5 spacing are needed to fill a 145x30ft. (tenth acre) covey headquarter.**

Shrubs from the MDC nursery come in bundles of 25. Plan accordingly. If you're worried about extra shrubs, just make your covey headquarter planting bigger!

## Build it and they will come...

In mid November I was checking some center pivot irrigation corners that had been enrolled in the Southeast Missouri Idle Land Pilot Program. The pivot corners had been idled since May. As farm manager Barry Uhrhan and I walked through one of the corners discussing the benefit of the various "weed" species we encountered a nice covey of quail rolled from the vegetation at our feet. Peeling out as singles, pairs and threesomes, the covey, totaling about 18 to 20 birds in all, flew to the far end of the 8 acre corner and the dense woody cover beyond.

As we discussed, with some excitement, the events of the last few moments Barry went on to tell me that he had seen quail and rabbits on other corners enrolled in the program and had also watched turkeys and deer using the early succession habitat that had developed in the pivot corners. Barry was amazed that wildlife would respond so quickly to the idle areas set aside through the program. **Dave Wissehr, Private Land Conservationist, Poplar Bluff**

We started in the spring of 2000 trying to improve quail habitat on our 360 acre farm near Silex, MO. We felt that we had 2-3 small coveys of birds that made it through the winter, and knew that if we started leaving some cover, we had potential to hold at least 10 coveys.

Our farm consists of several woody draws that run into a main block of timber. Our first efforts to improve habitat were planting a mixture of warm season grasses 25 ft. wide, around all the draws. (Be patient with the warm season grasses. We are just now starting to find it.) Adjacent to the warm season grass border, we broadcasted some lespedeza for some additional food. Many other annual weeds appeared in the lespedeza as well, especially ragweed. We have planted over 1500 shrubs over the last 3 years, mostly in covey headquarters, but also re-creating woody fence rows that used to exist on the farm. We made all those fence rows at least 60 ft. wide, allowing ragweed and other native weeds to add to the cover. The Dept. of Conservation recommended silky dogwood, roughleaf dogwood, wild plum, sumac and buckbrush. We have also made 8-10 large brush piles along some of our field edges. I believe these have really helped out the rabbits.

On a recent hunt in the fall of 2004, we have confirmed 13 coveys of birds, most of which have over 12 birds, with 5 or 6 coveys containing 15-20 birds. This number is very conservative, as this is the number of coveys that we have found with our dogs, and you never find them all. On that same hunt, we saw the most rabbits we have ever seen on our farm. Needless to say, we are very excited, and I feel that with just a little more effort and another year or two, we will reach 20 coveys. Sounds like Texas, but it can be done right here in Missouri!!

In closing, all I can say is if you have the cover, the birds will find it. I hear people blaming the coyotes and the hawks, and I used to be one of those people too. Put all that in the back of your mind and just create habitat. With the proper habitat, you will not believe how your quail numbers will turn around. **Dale Dunn, Landowner, Lincoln Co.**

This is an all too familiar story, at least the first part of it is. An 80-acre row crop farm in southern Cass County flourished with quail in the early 90's. Four coveys could be found in the fencerows, hedgerows, and woody draws that intermixed with the 50+ acres of row crops. By the winter of 2003, the quail numbers had decreased to the level of extinction. There was one small covey of 7 birds. What had changed in those 15 or so years to cause the quail population to almost disappear? It wasn't the farming practices, predators, or weather. It was the habitat that had changed. Large trees had grown up in the fencerows and hedgerows shading the ground underneath with branches extending 30-40 feet out into the field. The draws, waterways, and pastures were overgrown with fescue and locust trees. Brush had been replaced with mature trees. The quail had lost the "edge" that they needed to survive.

What this farm needed was a complete habitat makeover. This began in late 2003 and was completed by the Spring of 2004. Practices included cutting back the fencerows and hedgerows, establishing native grass field borders, renovating waterways and seeding them to switchgrass, planting small fields to wildlife friendly cool season grasses, and edge feathering along wooded areas. Existing covey headquarters were enhanced by spot spraying to kill invasive grasses.

The quail response to this extensive habitat makeover has been immediate. Quail were seen nesting in the weedy fencerows this Spring and there are now two coveys on the place totaling about 25 birds. An increase from 7 to 25 birds in less than a year is pretty good and it will get better.

Another good part of this story is that this habitat project also improved the farming practices on this farm. No tillable ground was lost to the habitat work and yields increased along the crop field edges where edge feathering was performed. It has proven to be a “win-win” situation for both the quail and the farmer.

**Tom Lampe, Quail Unlimited Habitat Chairman, Cass Co.**

## **Spring Covey Headquarters Calendar**

### **March**

Light disk through the end of April on non-CRP ground.

3/15 – Ending date for burning CRP warm season grasses.

Use chemicals to set back CRP cool season grasses 3/15 - 5/15.

Burn CRP cool season grasses 3/15 – 4/30.

For quail, DO NOT burn rank stands of warm season grass after 3/15.

### **April**

Burn fescue and brome to severely stunt grass.

Spray invading fescue and brome under shrubs and around edge feathering with herbicides.

Till and fertilize food plots.

4/30 – last day to order trees and shrubs from George O. White State Forestry Nursery.

### **May**

Quail nesting begins. If mowing can't be avoided, wait until 7/15.

Use chemicals to set back CRP warm season grasses 5/1 – 6/30.

Plant food plots this month for best results.

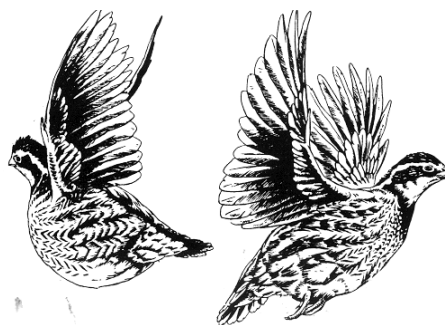
Clip weeds in newly planted warm season grasses to a height of 4-6 inches.

Plant shrub lespedeza seed at 8lb./acre

## **New Edge Feathering Video/DVD Available**

With financial assistance from a USDA Forest Land Enhancement Program education grant the Missouri Department of Conservation has released a new 7 1/2 minute how-to video and DVD on EDGEFEATHERING. If you would like a copy, send an e-mail to [travis.dinsdale@mdc.mo.gov](mailto:travis.dinsdale@mdc.mo.gov) or write to the address shown, attention Travis Dinsdale. Include your name and address. Indicate if you prefer a video or DVD version. Please allow 4-6 weeks for delivery.

**Be sure to attend your local “Quail Kick-off” event. These will be held throughout the state in early April. Contact your local MDC office for further details.**



## **Did You Know???**

Are you burning this Spring and need burn equipment? Contact your local Soil and Water Conservation District office. Many of these offices offer burn equipment for rent. Drip torches, rakes, flappers, and many other items may be available.

# CP29 Wildlife Habitat Buffers on Marginal Pastureland

Paul Frese, Soil Conservationist, USDA-NRCS, Albany

The CP29 practice is a great way to add quail and pheasant habitat on pasture ground along streams, ponds, and other water bodies. Landowners choose a native mix of wildlife friendly grass and wildflowers, plus shrubby cover in the form of planted shrubs. The CP29 buffer practice lets you add good nesting cover in the form of native grasses, shrubby cover, and bare ground if you disc in a firebreak. For more information or to sign up, please visit your local USDA Service Center.

## Program specifications:

- Eligible on pasture land adjacent to water bodies
- 25-120 ft in width
- 10-15 yr contract length
- Annual CRP rental payment
- \$100-\$150 per acre sign up bonus

## Technical specifications:

- Required to plant native warm season grasses plus 0.5 pound of native forbs per acre
- 1/10<sup>th</sup> acre per ¼ mile of buffer will be planted to shrubs
- Optional management can be prescribed burning to create bare ground

## How to Get a Soil Sample for Fertility Testing

Soil sampling is the most important step in soil testing. Fertilizer and limestone decisions hinge on results obtained from your sample. A well taken soil sample results in appropriate recommended rates of fertilizer and limestone. Conversely, a poorly taken sample may result in under- or over-application of fertilizer and limestone and in lower profit potential.

You can use a shovel or spade for sampling, but these tools are not as good as a probe or auger. If you use a shovel or spade, dig a hole to the proper sampling depth, about 6 or 7 inches. Then shave a 1-inch slice from the side of the hole to the sampling depth with the shovel. Save the vertical, 1-inch wide center portion of the soil as one sub-sample.

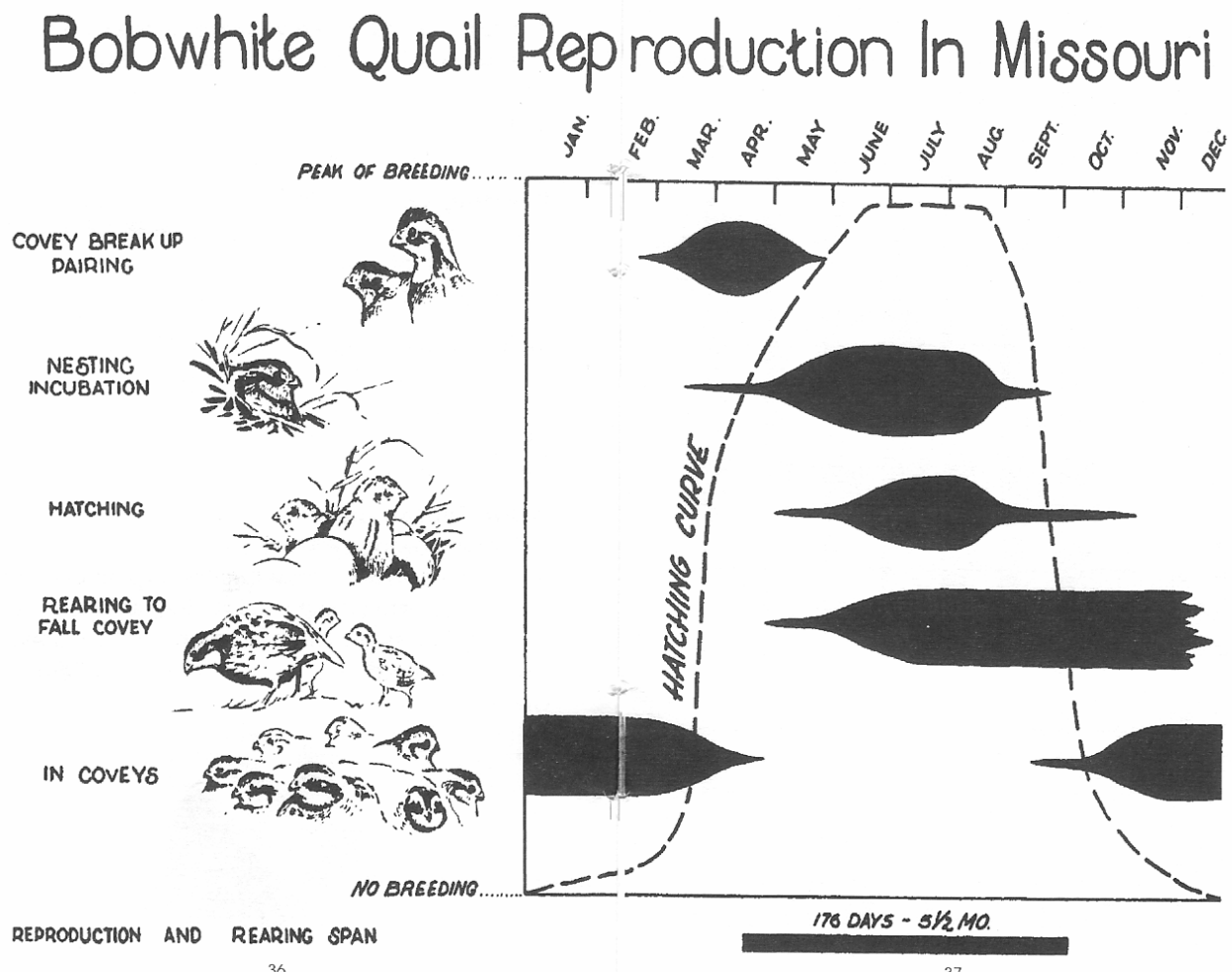
Always use a clean plastic pail for mixing sub-samples to obtain one composite sample. Metal pails contaminate the soil with micronutrients. Your local University Extension center has soil sample boxes available for use at no charge to you. One box of soil is all a laboratory needs for analyses.

Sample from uniform areas of a field. Map the fields or obtain field maps from your county's soil survey or USDA office. Carefully delineate any known differences in soil nutrient composition. Common causes of nutrient differences in a field include soil color, soil texture, slope, crop rotation, limestone, fertilizer, manure, and old farmsteads or feedlots. Avoid any known differences in composite samples; sample them separately.

A sample should not represent more than 20 acres. For each composite sample, take 15 to 20 separate cores at random in a zigzag pattern across the field. Allow the soil to dry, and then mix these sub-samples in a plastic pail and retain 1 pint for analyses.

You should take soil samples for fertilizer and limestone recommendations to a depth of 6 to 7 inches or to tillage depth if deeper. Soil sampling to the 6 to 7 inch depth is vitally important in pasture, permanent forages, minimum tillage, and no-till fields. Nutrients accumulate at the surface because of fertilizer application. The surface soil is not, however, a good indicator of fertility requirements. An equal amount of soil from the surface to 6 or 7 inches in depth (as obtained with a soil probe) is best for determining fertilizer needs for these situations. Soil samples are tested for acidity, phosphorus, potassium, calcium, magnesium, and organic matter to provide recommendations for limestone, nitrogen, phosphate, and potash on your crop. Soil samples can be taken to your local University Extension office and some fertilizer dealers. They will send your soil samples to a lab for analyses for a small fee.

Take a look at the following table to find out what your birds are doing year round.



### Did You Know???

We have been actively looking at covey headquarters shrub plantings across the state to determine if the plantings are working. Here is what we have found: 1. All small shrub plots are heavily defoliated by deer whether potted shrubs or seedlings, to the point of being failures. Much larger plantings will be needed to be made to offset any deer damage. 2. Shrubs resistant to deer defoliation include shrub lespedeza, false indigo, blackberry and aromatic sumac. 3. Covey headquarters are being created in 2-3 years from properly maintained plantings of shrub lespedeza and/or false indigo.

**Correction** — On page 4 of the Winter 2004 issue we left off the photo credit. The picture was taken by Fidel Hernandez. We regret the error.

## Mark Your Calendars

### Prescribed Burn Workshops

February 10, 2005 in Montgomery City. Call 573-564-3715 ext. 3 for further details

March 19, 2005 in Macon

March 23, 2005 in Moberly

Contact Ted Seiler for further details on both workshops at 660-385-2616 ext. 3

### Herbicides for CRP and Wildlife Management

February 16, 2005 9AM – 4PM Benson Convention and Expo Center, Clinton, MO

Register by sending name, address, and phone number to:

[clintonarea@earthlink.net](mailto:clintonarea@earthlink.net) or by calling 660-885-8166



The Covey Headquarters Newsletter  
3915 Oakland Ave  
St. Joseph, MO 64506

RETURN SERVICE REQUESTED